

the display layer 140. The light in combination with the disrupted liquid crystal creates the image displayed on the upper surface 118 of the display device 110.

[0022] As described above, the display device 110 is flexible. Accordingly, the mechanism used to affix the display layer 140 to the backlight layer 142 should maintain the flexibility of the display device 110. For example a transparent and pliable adhesive having a low durometer may be applied between the display layer 140 and the display layer 140 to adhere the layers together.

[0023] In addition to being flexible, the display device 110 is also lightweight. As implied above, there are no heavy substrates used within the display device 110. Accordingly, the display device 110 is lighter than conventional display devices. As described in greater detail below, the lightweight display device 110 increases the durability of the display device 110 and the viewing device 100, FIG. 1, as a whole. For example, if the viewing device 100 is dropped, there is a reduced probability that the impact of the drop will render the viewing device 100 inoperable because only a minimal force acts upon the lightweight display device 110 upon impact.

[0024] Having described the components of the viewing device 100, the operation of the viewing device 100 will now be described.

[0025] Referring again to FIG. 1, the viewing device 100 serves to convert image data to an image for display by the display device 110. Because the display device 110 is flexible, the viewing device 100 can be mishandled to a greater extent than a conventional viewing device without suffering damage. The flexibility of the display device 110 also provides for the viewing device 100 to be easily passed among people. For example, the display device 110 may wrap around the handle 112 so as to be compact and easily transported or handed to a person.

[0026] Image data is downloaded to the handle 112 of the viewing device 100 from the media device 136. The handle 112 may have a memory device, such as electronic random access memory that stores the image data downloaded from the media device 136. In another embodiment of the viewing device 100, the image data is stored on the media device 136 and is not stored in the viewing device 100. Electronics and/or software in the handle 112 transform the image data to a format so that images represented by the image data can be replicated on the upper surface 118 of the display device 110.

[0027] Image data representative of a first image is processed by the handle 112 so as to cause the first image to be displayed on the upper surface 118 of the display device 110. A user may press the increment button 138 to cause successive images to be displayed on the upper surface 118 of the display device 110. A user may display a specific image by use of the numeric keypad 137. For example, a user wishing to view the seventh image may press the number seven, not shown, on the numeric keypad 137, which will cause the viewing device 100 to display the seventh image on the display device 110.

[0028] The viewing device 100 has many advantages over conventional film-type photographs. For example, film-type photographs wear and are subject to being damaged when they are passed among people. The display device 110 is

more durable than film-type photographs and can be cleaned unlike film-type photographs. Accordingly, the images displayed by the display device 110 are not subject to degradation after being passed among users. In addition, the images displayed by the viewing device 100 remain in a predetermined order, whereas conventional film-type photographs tend to become disorganized as they are passed among people.

[0029] Having described an embodiment of the viewing device 100, other embodiments will now be described.

[0030] The display device 110 described in FIGS. 1 and 2 uses a liquid crystal display device, which requires a relatively high amount of power. One embodiment of the display device 110 uses a flexible light-emitting device. This embodiment alleviates the need for the backlight layer 142. Accordingly, the display device 110 may have a single layer, which may increase the flexibility of the display device 110. More specifically, the single layer eliminates the slip planes inherent with regard to the display device 110 having a display layer 140 and a backlight layer 142 operatively connected together. In one non-limiting embodiment of the viewing device 100, the display device 110 is a flexible organic light-emitting display. Such displays are known in the art.

[0031] The flexible light-emitting device may use less power than the LCD device using the backlight layer 142. Accordingly, a portable power source, such as the above-referenced batteries, associated with the viewing device 100 may last longer. The use of the flexible light-emitting device may also improve viewing of the viewing device 100 in dark conditions.

[0032] Another embodiment of the display device 110 includes the addition of a flexible pressure sensing layer 160 or a touchscreen 160 is shown in FIG. 4. The pressure sensing layer 160 may be a transparent layer having an upper surface 162 and a lower surface 164. The upper surface 162 of the pressure sensing layer 160 is the same surface as the upper surface 118 of the display device 110 as shown in FIG. 1. The lower surface 164 is operatively connected to an upper surface 166 of a display layer 168. The display layer 168 may be substantially similar to the display devices described above and may serve to display data generated by the handle 112, FIG. 1.

[0033] The pressure sensing layer 160 may serve as an input device for the viewing device 100, FIG. 1. For example, a user may modify the replicated image displayed on the display device 110 by use of the pressure sensing layer 160. In one example of modifying a displayed image, a user may input an enlarge command to the handle 112 by pressing preselected keys on the numeric keypad 137. The user may then enlarge a portion of the replicated image by pressing the pressure sensing layer 160 in the vicinity of the replicated image that is to be enlarged.

[0034] The pressure sensing layer 160 may also enable a user to select images to be replicated. For example, the display device 110 may display a plurality of small thumbnail images on the display device 110 that are representative of images stored in the media device 136. A user may enlarge one of the thumbnail images by simply pressing the pressure sensing layer 160 in the vicinity of the thumbnail image that is to be enlarged.